**Supplementary table 1**: Feed formulation in g/100g for the 3mm pellet size.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pellet size | 3 mm | | | |
|  | Diet 1 | Diet 2 | Diet 6 | Diet 1H |
| Wheat | 8.8 | 8.8 | 8.8 | 8.8 |
| Soya protein concentrate | 31.5 | 31.5 | 31.5 | 31.5 |
| Sunflower meal | 6.0 | 6.0 | 6.0 | 6.0 |
| Wheat gluten | 18.2 | 18.2 | 18.2 | 18.2 |
| Faba beans dehulled | 2.0 | 2.0 | 2.0 | 2.0 |
| FM North Atlantic | 10.0 | 10.0 | 10.0 | 10.0 |
| Linseed oil | 1.0 | 1.1 | 1.1 | 2.3 |
| Sunflower oil | 0.5 | 4.0 | 16.3 | 4.3 |
| Olive oil | 10.2 | 7.1 | 0.0 | 2.0 |
| Coconut oil | 0.7 | 0.3 | 0.0 | 0.0 |
| FO North Atlantic | 0.0 | 0.0 | 3.2 | 4.6 |
| FO Capelin | 8.2 | 8.2 | 0.0 | 7.6 |
| Premixes | 3.2 | 3.2 | 3.2 | 3.2 |
| Diet 1/Diet 2/Diet 6/Diet 1H, diet codes are set according to dietary n-6/n-3 FA ratio. The final diet is labelled 1H due to its higher absolute contents of n-3 and n-6 FA compared to the first diet | | | | |

**Supplementary table 2:** Analysed dietary proximate (g/100g) and full fatty acid composition (% of total FA, total FA in mg/g) of the four diets at both pellet sizes.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 3 mm | | | | 4 mm | | | |
|  | Diet 1 | Diet 2 | Diet 6 | Diet 1H | Diet 1 | Diet 2 | Diet 6 | Diet 1H |
| **Proximate**  **composition g/100g** |  |  |  |  |  |  |  |  |
| Lipid | 25.5 | 24.6 | 25.8 | 25.5 | 29.8 | 30.0 | 28.6 | 28.8 |
| Protein | 46.6 | 47.0 | 45.5 | 46.3 | 44.5 | 44.1 | 44.5 | 44.8 |
| Ash | 5.3 | 5.5 | 5.7 | 5.5 | 5.1 | 5.2 | 5.5 | 5.4 |
| **Fatty acids**  **(% of total area)** |  |  |  |  |  |  |  |  |
| **ΣSFA** | 20.3 | 18.2 | 16.0 | 19.9 | 19.7 | 19.7 | 16.6 | 19.8 |
| 8:0 | 0.2 | 0.1 | ≤LOQ | ≤LOQ | 0.2 | 0.2 | 0.1 | ≤LOQ |
| 10:0 | 0.2 | 0.1 | ≤LOQ | ≤LOQ | 0.2 | 0.2 | 0.1 | ≤LOQ |
| 12:0 | 1.4 | 0.7 | 0.0 | 0.1 | 1.3 | 1.7 | 0.4 | 0.1 |
| 14:0 | 3.5 | 3.1 | 1.4 | 4.1 | 3.3 | 3.5 | 1.5 | 4.4 |
| 15:0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 |
| 16:0 | 11.6 | 10.7 | 9.5 | 11.8 | 11.2 | 10.4 | 9.4 | 11.5 |
| 18:0 | 2.4 | 2.6 | 3.6 | 2.8 | 2.5 | 2.6 | 3.7 | 2.7 |
| 20:0 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 |
| 22:0 | 0.5 | 0.6 | 0.9 | 0.6 | 0.5 | 0.6 | 0.9 | 0.6 |
| 24:0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 |
| **ΣMUFA** | 57.7 | 52.8 | 27.5 | 41.9 | 59.4 | 52.2 | 27.3 | 43.5 |
| 14:1n-5 | 0.1 | 0.1 | ≤LOQ | 0.1 | 0.1 | 0.1 | ≤LOQ | 0.1 |
| 16:1n-7 | 3.8 | 3.6 | 1.5 | 4.8 | 3.8 | 3.7 | 1.5 | 5.1 |
| 16:4n-1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.1 | 0.3 |
| 18:1n-5 | 0.2 | 0.2 | ≤LOQ | 0.2 | 0.2 | 0.2 | ≤LOQ | 0.2 |
| 18:1n-7 | 2.2 | 2.0 | 1.1 | 2.0 | 2.2 | 2.0 | 1.1 | 2.0 |
| 18:1n-9 | 36.1 | 31.2 | 22.7 | 19.6 | 37.1 | 30.1 | 23.1 | 18.2 |
| 20:1n-7 | 0.3 | 0.3 | ≤LOQ | 0.3 | 0.3 | 0.3 | ≤LOQ | 0.3 |
| 20:1n-9 | 6.1 | 6.2 | 0.8 | 6.0 | 6.4 | 6.4 | 0.7 | 7.0 |
| 20:1n-11 | 0.3 | 0.3 | 0.1 | 0.4 | 0.3 | 0.4 | 0.1 | 0.4 |
| 21:5n-3 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 |
| 22:1n-7 | 0.1 | 0.1 | ≤LOQ | 0.1 | 0.1 | 0.1 | ≤LOQ | 0.1 |
| 22:1n-9 | 0.9 | 0.9 | 0.1 | 0.9 | 0.9 | 0.9 | 0.1 | 1.0 |
| 22:1n-11 | 7.3 | 7.5 | 0.9 | 7.3 | 7.7 | 7.7 | 0.7 | 8.5 |
| 24:1n-9 | 0.3 | 0.3 | 0.1 | 0.4 | 0.3 | 0.3 | 0.1 | 0.4 |
| **Σn-6** | 11.7 | 19.0 | 47.4 | 20.2 | 11.1 | 18.2 | 46.9 | 18.4 |
| 16:2n-6 | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 0.1 | 0.3 |
| 18:2n-6 | 11.3 | 18.7 | 47.1 | 19.4 | 10.8 | 17.9 | 46.7 | 17.6 |
| 18:3n-6 | ≤LOQ | ≤LOQ | ≤LOQ | 0.1 | ≤LOQ | ≤LOQ | ≤LOQ | 0.1 |
| 20:2n-6 | 0.1 | 0.1 | ≤LOQ | 0.1 | 0.1 | 0.1 | ≤LOQ | 0.1 |
| 20:3n-6 | ≤LOQ | ≤LOD | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ |
| 20:4n-6 (ARA) | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 |
| **Σn-3** | 8.3 | 7.8 | 7.7 | 15.1 | 7.7 | 7.7 | 7.8 | 15.1 |
| 18:3n-3 | 3.0 | 3.0 | 3.0 | 5.8 | 2.9 | 2.9 | 3.1 | 5.7 |
| 18:4n-3 | 0.6 | 0.5 | 0.4 | 0.9 | 0.5 | 0.5 | 0.4 | 0.9 |
| 20:3n-3 | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ | ≤LOQ |
| 20:4n-3 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.2 | 0.3 |
| 20:5n-3 (EPA) | 2.5 | 2.3 | 2.0 | 4.3 | 2.4 | 2.4 | 2.0 | 4.4 |
| 22:5n-3 | 0.2 | 0.2 | 0.3 | 0.5 | 0.2 | 0.2 | 0.3 | 0.5 |
| 22:5n-6 | ≤LOQ | ≤LOQ | ≤LOQ | 0.06 | ≤LOQ | ≤LOQ | ≤LOQ | 0.1 |
| 22:6n-3 (DHA) | 1.7 | 1.6 | 1.8 | 3.2 | 1.5 | 1.5 | 1.8 | 3.1 |
| EPA + DHA | 4.3 | 3.9 | 3.8 | 7.4 | 3.9 | 3.9 | 3.8 | 7.5 |
| **ΣPUFA** | 22.1 | 29.0 | 56.5 | 38.3 | 20.9 | 28.1 | 56.1 | 36.8 |
| n-6/n-3 | 1.4 | 2.4 | 6.2 | 1.3 | 1.4 | 2.4 | 6.1 | 1.2 |
| **Sum FA (mg/g)** | 227.3 | 223.2 | 253.4 | 223.3 | 270.7 | 272.7 | 296.5 | 255.3 |
| Diet 1/Diet 2/Diet 6/Diet 1H, diet codes are set according to dietary n-6/n-3 FA ratio. The final diet is labelled 1H due to its higher absolute contents of n-3 and n-6 FA compared to the first diet; FA, fatty acid; SFA, saturated fatty acids; MUFA, monounsaturated fatty acids; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid; PUFA, polyunsaturated fatty acids; LOQ: limit of quantification (0.1% of total FA) | | | | | | | | |

**Supplementary table 3**: Fatty acid composition (% of total FA) of the Norwegian quality cut (NQC; fillet) of Atlantic salmon fed diets with varying dietary n-6/n-3 ratios and absolute levels of n-6 FA and n-3 FA.

(Mean values with their standard deviations of three tanks per diet with six fish pooled per tank, n = 3. Significantly different means are denoted by different superscript letters.)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Diet 1 | | Diet 2 | | | | Diet 6 | | | Diet 1H | |
|  | Mean | SD | | Mean | SD | Mean | | SD | Mean | | SD |
| **ΣSFA** | 19.5 b | <0.1 | | 19.2 b | 0.1 | 16.8 a | | 0.1 | 19.9 c | | 0.2 |
| **ΣMUFA** | 57.9 d | 0.2 | | 51.7 c | 0.2 | 28.8 a | | 0.3 | 43.3 b | | 0.1 |
| **Σn-6** | 11.2 a | <0.1 | | 17.9 b | 0.2 | 43.3 c | | 0.5 | 18.1 b | | <0.1 |
| 18:2n-6 | 9.5 a | <0.1 | | 15.4 b | 0.1 | 38.3 d | | 0.5 | 16.0 c | | <0.1 |
| 20:2n-6 | 0.3 a | <0.1 | | 1.0 b | <0.1 | 2.0 c | | 0.1 | 0.9 b | | <0.1 |
| 20:3n-6 | 0.5 a | <0.1 | | 0.8 b | 0.1 | 1.5 c | | <0.1 | 0.4 a | | <0.1 |
| 20:4n-6 (ARA) | 0.4 c | <0.1 | | 0.4 b | <0.1 | 0.6 a | | <0.1 | 0.6 a | | <0.1 |
| **Σn-3** | 8.8 a | 0.1 | | 8.6 a | 0.1 | 8.6 a | | 0.2 | 15.5 b | | 0.2 |
| 18:3n-3 | 2.0 a | <0.1 | | 2.1 a | <0.1 | 2.2 b | | <0.1 | 4.5 c | | <0.1 |
| 20:5n-3 (EPA) | 1.4 b | <0.1 | | 1.4 b | <0.1 | 1.2 a | | <0.1 | 2.8 c | | 0.1 |
| 22:6n-3 (DHA) | 3.5 a | 0.1 | | 3.3 a | <0.1 | 3.6 a | | 0.2 | 5.1 b | | 0.2 |
| EPA + DHA | 4.9 a | 0.1 | | 4.7 a | 0.1 | 4.9 a | | 0.2 | 7.8 b | | 0.1 |
| **ΣPUFA** | 20.0 a | 0.2 | | 26.6 b | 0.1 | 51.9 d | | 0.4 | 33.8 c | | 0.2 |
| **n-6/n-3** | 1.3 a | <0.1 | | 2.1 b | <0.1 | 5.0 c | | 0.1 | 1.2 a | | <0.1 |
| **Total fatty acids (mg/g)** | 106.1 | 3.6 | | 102.8 | 3.1 | 104.8 | | 6.7 | 110.3 | | 1.3 |
| Diet 1/Diet 2/Diet 6/Diet 1H, diet codes are set according to dietary n-6/n-3 FA ratio. The final diet is labelled 1H due to its higher absolute contents of n-3 and n-6 compared to the first diet; FA, fatty acid; SFA, saturated fatty acids; MUFA, monounsaturated fatty acids; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid; PUFA, polyunsaturated fatty acids | | | | | | | | | | | |

**Supplementary table 4:** Fatty acid composition (% of total FA) of the polar and neutral lipids of the liver in Atlantic salmon fed diets with varying dietary n-6/n-3 FA ratios and absolute levels of n-6 and n-3 FA.

(Mean values with standard deviation of three tanks per diet with 6 fish pooled per tank, n = 3. Significantly different means are denoted by different superscript letters.)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Diet 1 | | Diet 2 | | Diet 6 | | Diet 1H | |
|  | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| **Polar lipids** |  |  |  |  |  |  |  |  |
| **ΣSFA** | 24.9 ab | 1.0 | 25.4 b | 0.9 | 23.5 a | 0.2 | 25.6 b | 0.2 |
| **ΣMUFA** | 20.6 d | 0.2 | 17.3 c | 0.2 | 10.4 a | <0.1 | 14.2 b | 0.2 |
| **Σn-6** | 14.8 a | 0.3 | 20.3 b | 0.2 | 33.8 c | 0.3 | 14.5 a | 0.1 |
| 18:2n-6 | 6.2 a | 0.4 | 9.0 b | 0.1 | 16.0 c | 0.2 | 6.7 a | 0.1 |
| 20:2n-6 | 1.1 a | 0.1 | 1.6 b | 0.2 | 4.1 c | 0.2 | 1.7 b | <0.1 |
| 20:3n-6 | 4.0 b | 0.2 | 5.4 c | 0.2 | 6.2 d | 0.3 | 2.2 a | <0.1 |
| 20:4n-6 (ARA) | 3.1 a | 0.3 | 3.7 b | 0.2 | 6.4 c | 0.1 | 3.3 ab | <0.1 |
| **Σn-3** | 38.4 c | 0.9 | 35.8 b | 0.5 | 31.4 a | 0.5 | 44.2 d | 0.3 |
| 18:3n-3 | 0.5 a | <0.1 | 0.4 a | <0.1 | 0.4 a | <0.1 | 0.9 b | 0.1 |
| 20:4n-3 | 0.7 b | 0.1 | 0.6 b | <0.1 | 0.4 a | <0.1 | 0.9 c | <0.1 |
| 20:5n-3 (EPA) | 7.5 b | 0.6 | 6.6 b | 0.4 | 3.3 a | 0.1 | 8.7 c | 0.2 |
| 22:5n-3 | 2.2 bc | 0.1 | 2.1 b | 0.2 | 1.2 a | 0.1 | 2.4 c | 0.1 |
| 22:6n-3 (DHA) | 26.8 a | 1.3 | 25.4 a | 1.1 | 25.7 a | 0.5 | 30.9 b | 0.3 |
| **ΣPUFA** | 53.3 a | 0.6 | 56.2 b | 0.6 | 65.2 d | 0.3 | 58.8 c | 0.3 |
| **n-6/n-3** | 0.4 b | <0.1 | 0.6 c | <0.1 | 1.1 d | <0.1 | 0.3 a | <0.1 |
| **Neutral lipids** |  |  |  |  |  |  |  |  |
| **ΣSFA** | 17.0 b | 0.9 | 17.4 a | 1.3 | 13.5 a | 1.1 | 18.7 b | <0.1 |
| **ΣMUFA** | 69.7 d | 0.8 | 62.0 c | 0.3 | 37.8 a | 05. | 51.9 b | 1.3 |
| **Σn-6** | 8.2 a | 0.5 | 14.3 b | 1.1 | 43.5 c | 1.8 | 15.9 b | 0.7 |
| 18:2n-6 | 6.4 a | 0.3 | 11.1 b | 0.8 | 34.2 c | 1.0 | 12.8 b | 0.7 |
| 20:2n-6 | 0.7 a | 0.1 | 1.3 a | 0.3 | 5.4 b | 0.9 | 1.5 a | 0.2 |
| 20:3n-6 | 0.6 a | <0.1 | 1.2 c | 0.1 | 2.6 d | <0.1 | 0.8 b | <0.1 |
| 20:4n-6 (ARA) | 0.2 a | 0.1 | 0.4 b | <0.1 | 0.7 c | <0.1 | 0.7 c | <0.1 |
| **Σn-3** | 3.8 a | 0.4 | 5.1 a | 0.1 | 4.3 a | 0.5 | 11.9 b | 1.2 |
| 18:3n-3 | 0.9 a | 0.1 | 1.0 a | 0.1 | 1.4 b | <0.1 | 2.9 c | 0.2 |
| 20:5n-3 (EPA) | 0.7 ab | 0.1 | 0.9 b | 0.1 | 0.6 a | 0.1 | 2.2 c | 0.2 |
| 22:6n-3 (DHA) | 1.5 b | 0.2 | 2.3 b | 0.1 | 1.7 b | 0.4 | 4.5 a | 0.8 |
| **ΣPUFA** | 12.2 a | 0.8 | 19.7 b | 1.3 | 48.0 d | 1.5 | 28.1 c | 1.2 |
| **n-6/n-3** | 2.2 b | 0.1 | 2.8 b | 0.2 | 10.2 c | 1.5 | 1.4 a | 0.2 |
| Diet 1/Diet 2/Diet 6/Diet 1H, diet codes are set according to dietary n-6/n-3 ratio. The final diet is labelled 1H due to its higher absolute contents of n-3 and n-6 compared to the first diet; FA, fatty acid; SFA, saturated fatty acids; MUFA, monounsaturated fatty acids; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid; PUFA, polyunsaturated fatty acids | | | | | | | | |

**Supplementary table 5**: Fatty acid composition (% of total FA) of the RBC in Atlantic salmon fed diets with varying dietary n-6/n-3 FA ratios and absolute levels of n-6 FA and n-3 FA.

(Mean values with standard deviation of three tanks per diet with samples from three fish per tank, n = 3. Significantly different means are denoted by different superscript letters.)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Diet 1 | | Diet 2 | | Diet 6 | | Diet 1H | |
|  | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| **ΣSFA** | 30.4 | 1.4 | 31.5 | 3.0 | 30.6 | 1.1 | 30.8 | 1.2 |
| **ΣMUFA** | 12.6 c | 1.1 | 10.4 b | 0.4 | 7.1 a | 0.6 | 8.0 a | 0.7 |
| **Σn-6** | 9.0 a | 0.4 | 12.0 b | 1.0 | 20.0 c | 0.8 | 8.7 a | 0.4 |
| 18:2n-6 | 3.7 a | 0.2 | 5.3 b | 0.6 | 10.0 c | 1.0 | 3.9 a | 0.2 |
| 20:2n-6 | 0.5 a | 0.1 | 0.8 b | 0.2 | 1.5 c | 0.2 | 0.5 a | 0.1 |
| 20:3n-6 | 1.9 b | 0.2 | 2.6 c | 0.3 | 3.4 d | 0.4 | 1.0 a | 0.1 |
| (ARA) 20:4n-6 | 2.9 a | 0.3 | 3.3 a | 0.3 | 5.1 b | 0.3 | 3.3 a | 0.2 |
| **Σn-3** | 48.4 c | 0.9 | 46.1 b | 2.3 | 42.2 a | 0.7 | 52.6 d | 1.1 |
| 20:4n-3 | 1.0 b | 0.1 | 0.9 b | 0.1 | 0.6 a | 0.1 | 1.1 b | 0.1 |
| (EPA) 20:5n-3 | 8.0 b | 0.9 | 7.3 b | 0.9 | 4.5 a | 0.7 | 9.5 c | 0.9 |
| 22:5n-3 | 2.9 b | 0.3 | 2.9 b | 0.3 | 2.4 a | 0.3 | 3.4 c | 0.4 |
| (DHA) 22:6n-3 | 36.5 ab | 1.2 | 35.0 a | 2.3 | 34.7 a | 0.9 | 38.7 b | 1.5 |
| **ΣPUFA** | 57.4 a | 0.8 | 58.1 a | 2.8 | 62.3 b | 0.8 | 61.2 b | 1.3 |
| **n-6/n-3** | 0.2 b | <0.1 | 0.3 c | <0.1 | 0.5 d | <0.1 | 0.2 a | <0.1 |
| Diet 1/Diet 2/Diet 6/Diet 1H, diet codes are set according to dietary n-6/n-3 FA ratio. The final diet is labelled 1H due to its higher absolute contents of n-3 and n-6 FA compared to the first diet; RBC, red blood cells; FA, fatty acid; SFA, saturated fatty acids; MUFA, monounsaturated fatty acids; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid; PUFA, polyunsaturated fatty acids | | | | | | | | |

**Supplementary table 6:** Fatty acid composition (% of total FA) of PC, PE, PI and PS in the skin of Atlantic salmon fed diets with varying dietary n-6/n-3 FA ratios and absolute levels of n-6 and n-3 FA. (Mean values with standard deviation of three tanks per diet with three skin samples pooled per tank, n = 3. Significantly different means are denoted by different superscript letters.)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PC | | | | | | | | PE | | | | | | | |
|  | Diet 1 | | Diet 2 | | Diet 6 | | Diet 1H | | Diet 1 | | Diet 2 | | Diet 6 | | Diet 1H | |
|  | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| **ΣSFA** | 32.1 | 2.4 | 33.6 | 0.3 | 33.6 | 0.6 | 34.0 | 0.5 | 13.0 | 0.9 | 15.4 | 2.4 | 14.7 | 0.8 | 14.7 | 2.0 |
| **ΣMUFA** | 30.3 b | 2.2 | 28.5 b | 0.5 | 23.6 a | 0.7 | 25.6 a | 1.4 | 27.8 b | 0.7 | 25.9 b | 4.9 | 16.4 a | 0.4 | 20.5 ab | 0.9 |
| **Σn-6** | 11.1 a | 0.5 | 15.3 b | 0.9 | 25.6 c | 0.1 | 10.3 a | 0.5 | 13.9 a | 0.6 | 20.2 c | 0.7 | 33.5 d | 0.3 | 16.2 b | 1.1 |
| 18:2n-6 | 5.7 a | 0.3 | 8.6 b | 0.5 | 15.3 c | 0.5 | 5.7 a | 0.3 | 5.6 a| | 0.4 | 8.5 b | 0.1 | 16.0 c | 0.6 | 7.5 b | 0.4 |
| 20:2n-6 | 0.8 a | <0.1 | 1.3 b | 0.2 | 2.3 c | 0.1 | 1.0 a | <0.1 | 0.8 a | <0.1 | 1.2 b | 0.1 | 2.3 c | 0.1 | 1.3 b | 0.1 |
| 20:3n-6 | 2.4 b | 0.1 | 3.1 b | 0.4 | 3.9 c | 0.5 | 1.4 a | 0.2 | 2.0 b | 0.1 | 2.8 c | 0.2 | 3.3 d | 0.2 | 1.3 a | 0.1 |
| (ARA) 20:4n-6 | 1.9 a | 0.3 | 2.1 a | 0.2 | 3.7 b | <0.1 | 2.1 a | 0.3 | 5.4 a | 0.1 | 7.4 b | 0.2 | 11.5 c | 0.2 | 6.1 a | 0.1 |
| **Σn-3** | **24.3 bc** | **4.1** | **20.6 ab** | **1.2** | **15.8 a** | **0.9** | **27.6 c** | **2.1** | **36.2 bc** | **0.7** | **33.1 b** | **1.5** | **27.1 a** | **1.9** | **40.3 c** | **3.0** |
| 18:3n-3 | 0.5 a | 0.1 | 0.5 a | <0.1 | 0.5 a | <0.1 | 0.8 b | 0.1 | 0.3 b | <0.1 | 0.3 b | <0.1 | <0.1 a | 0.1 | 0.5 c | <0.1 |
| (EPA) 20:5n-3 | 8.5 bc | 1.8 | 7.2 b | 0.4 | 4.3 a | 0.1 | 10.1 c | 0.7 | 9.0 bc | 0.7 | 8.1 b | 0.5 | 5.1 a | 0.2 | 9.5 c | 0.4 |
| 22:5n-3 | 1.8 a | 0.4 | 1.5 a | 0.1 | 1.0 a | 0.1 | 1.8 a | 0.1 | 2.0 b | 0.2 | 2.0 b | 0.1 | 1.4 a | 0.1 | 2.3 b | 0.1 |
| (DHA) 22:6n-3 | 13.5 ab | 1.9 | 11.5 a | 1.0 | 10.1 a | 0.7 | 14.8 b | 1.7 | 24.8 ab | 0.3 | 22.7 a | 1.2 | 20.5 a | 1.7 | 28.1 b | 2.9 |
| **ΣPUFA** | 35.3 a | 4.4 | 35.9 a | 0.4 | 41.4 b | 1.0 | 37.9 ab | 1.8 | 50.2 a | 0.8 | 50.4 a | 5.8 | 60.7 b | 1.6 | 56.5 ab | 2.4 |
| **n-6/n-3** | 0.5 a | 0.1 | 0.7 b | 0.1 | 1.6 c | 0.1 | 0.4 a |  | 0.4 a |  | 0.6 b |  | 1.2 c | 0.1 | 0.41 a | 0.1 |
|  | PI | | | | | | | | PS | | | | | | | |
|  | Diet 1 | | Diet 2 | | Diet 6 | | Diet 1H | | Diet 1 | | Diet 2 | | Diet 6 | | Diet 1H | |
|  | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| **ΣSFA** | 33.5 | 7.6 | 41.8 | 6.5 | 46.6 | 1.2 | 43.1 | 3.7 | 36.1 | 4.0 | 33.7 | 5.8 | 31.2 | 3.8 | 35.4 | 5.7 |
| **ΣMUFA** | 38.2 b | 8.2 | 15.7 a | 2.8 | 8.3 a | 0.2 | 12.4 a | 1.4 | 14.9 b | 0.5 | 14.1 bc | 0.9 | 10.3 a | 1.5 | 11.7 ac | 1.6 |
| **Σn-6** | 15.8 | 4.0 | 22.2 | 1.4 | 27.1 | 0.9 | 22.0 | 2.0 | 17.5 | 2.3 | 17.0 | 1.5 | 23.3 | 0.7 | 15.6 | 4.3 |
| 18:2n-6 | 3.9 | 2.3 | 3.4 | 1.1 | 3.8 | 0.4 | 2.1 | 0.2 | 1.9 a | 0.2 | 3.6 a | 1.1 | 7.4 b | 1.7 | 2.6 a | 0.8 |
| 20:2n-6 | 0.7 a | 0.6 | 1.3 ab | 0.2 | 1.7 b | 0.4 | 1.3 ab | 0.2 | 0.8 a | <0.1 | 1.1 b | 0.1 | 1.8 c | 0.1 | 1.0 ab | 0.1 |
| 20:3n-6 | 1.4 | 1.4 | 3.0 | 0.5 | 2.9 | 0.1 | 1.9 | 0.5 | 3.3 b | 0.4 | 3.6 b | 0.4 | 4.5 c | 0.3 | 1.8 a | 0.1 |
| (ARA) 20:4n-6 | 9.9 a | 4.7 | 14.5 ab | 2.0 | 18.7 b | 1.4 | 16.6b | 1.4 | 11.4 | 2.9 | 8.5 | 3.0 | 9.2 | 1.5 | 10.1 | 4.8 |
| **Σn-3** | 15.8 | 6.2 | 19.5 | 5.3 | 17.7 | 0.8 | 20.8 | 3.5 | 30.9 | 6.4 | 34.8 | 6.9 | 34.9 | 2.1 | 36.7 | 10.1 |
| 18:3n-3 | <LOQ | - | <LOQ | - | <LOQ | - | 0.2 | 0.4 | <LOQ | - | 0.1 | 0.2 | 0.3 | 0.1 | 0.2 | 0.3 |
| (EPA) 20:5n-3 | 2.9 | 0.5 | 2.9 | 1.3 | 1.1 | 0.2 | 2.6 | 0.2 | 4.6 | 2.0 | 6.4 | 3.1 | 5.6 | 1.3 | 6.9 | 3.9 |
| 22:5n-3 | 0.8 | 1.4 | 1.5 | 1.0 | 1.8 | 0.6 | 1.9 | 0.6 | 2.9 | 0.3 | 2.7 | 0.3 | 2.2 | 0.3 | 3.0 | 0.7 |
| (DHA) 22:6n-3 | 11.9 | 5.3 | 15.1 | 3.9 | 14.8 | 1.0 | 16.0 | 0.6 | 23.5 | 4.2 | 25.7 | 3.6 | 26.8 | 0.8 | 26.6 | 5.7 |
| **ΣPUFA** | 25.8 a | 2.8 | 41.7 b | 5.7 | 44.8 b | 1.2 | 42.8 b | 4.5 | 48.4 | 4.2 | 51.8 | 5.4 | 58.2 | 2.7 | 52.3 | 5.9 |
| **n-6/n-3** | 1.0 | 0.2 | 1.2 | 0.3 | 1.5 | 0.1 | 1.1 | 0.2 | 0.6 | 0.2 | 0.5 | 0.1 | 0.7 | <0.1 | 0.5 | 0.3 |
| Diet 1/Diet 2/Diet 6/Diet 1H, diet codes are set according to dietary n-6/n-3 FA ratio. The final diet is labelled 1H due to its higher absolute contents of n-3 and n-6 FA compared to the first diet; FA, fatty acid; PC, phosphatidylcholine; PE, phosphatidylethanolamine; PI, phosphatidylinositol; PS, phosphatidylserine; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid; | | | | | | | | | | | | | | | | |